



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,788	02/03/2004	Richard Palicka	CERCOM-6	9245
28230	7590	09/09/2005	EXAMINER	
H JAY SPIEGEL P.O. BOX 444 MOUNT VERNON, VA 22121			ELDRED, JOHN W	
			ART UNIT	PAPER NUMBER
			3644	
DATE MAILED: 09/09/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/769,788	Applicant(s) PALICKA ET AL.	
	Examiner J. Woodrow Eldred	Art Unit 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 15-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Applicant's election without traverse of Group I, claims 1-14 in the reply filed on 6-16-05 is acknowledged.
2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the limitations of "a ceramic material encapsulated within a metallic material, on one side of said ceramic material" is vague and indefinite. First, "encapsulated" implies "surrounding" so it is not clear how the metal could encapsulate the ceramic "on one side". Also, it is not clear that "encapsulated" allows a plate to be "interposed between" the ceramic and the metallic material. In claim 1, line 7, "other sides" is indefinite and has no antecedent basis in the claims. In claim 8, "such as" is vague and indefinite, since it is not clear if this defines a required limitation. Also in claim 8, the acronym "PAD" is unclear. In claim 14, "assemblies" has no antecedent basis in the claims and it is not clear what elements are being assembled.
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
5. Claims 1, 2, 5, 6, and 10-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Klimmek (3,616,115).

See especially column 2, lines 48-52 and column 3, lines 10-12. Note that element 30 reads over the “ceramic material” and element 32 forms a “composite stiffening plate” and it is interposed between the ceramic material the lowest layer of metal. Note also that the properties of claim 2 are inherently met by at least some of the disclosed materials. In regard to claim 14, the layers of different materials are considered “assemblies”.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klimmek (3,616,115) in view of Tarry (5,443,917).

Klimmek discloses an armor comprising a ceramic material 30 encapsulated in titanium metal, with a stiffening plate 32 between the ceramic material and a portion of the metal. Klimmek fails to disclose the stiffening plate as comprising a “cermet composite”. Tarry teaches that it is well known to form an armor plate with a cermet armor composite material. See especially column 1, line 64-column 2, line 25. Motivation to combine is the mere substitution of one known armor composite for another, with the advantages of the performance provided by the materials taught by Tarry. To employ the teachings of Tarry on the armor of Klimmek and have a cermet stiffening plate is considered to have been obvious to one having ordinary skill in the art. Also, the particular parameters of the materials in claim 9 are not specifically cited by Klimmek, but they are believed to either be inherent or, lacking evidence of any unexpected results, obvious parameters which would be obtained by one having ordinary skill in the art by selecting the particular materials being used with desired performance parameters in mind.

Art Unit: 3644

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klimmek (3,616,115) in view of Oden et al (5,455,079).

Klimmek discloses an armor comprising a ceramic material 30 encapsulated in titanium metal, with a stiffening plate 32 between the ceramic material and a portion of the metal. Klimmek fails to disclose the stiffening plate as comprising a Ti-TiB composite. Oden et al teach that it is well known to form an armor plate with a Ti-TiB composite. See especially column 2, line 60-column 2, line 48. Motivation to combine is the mere substitution of one known armor composite for another, with the advantages of the increased performance and greater hardness provided by the materials taught by Oden et al. To employ the teachings of Oden et al on the armor of Klimmek and have a Ti-TiB stiffening plate is considered to have been obvious to one having ordinary skill in the art.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klimmek (3,616,115) in view of Moyson et al (6,635,357).

Klimmek discloses an armor comprising a ceramic material 30 encapsulated in titanium metal, with a stiffening plate 32 between the ceramic material and a portion of the metal. Klimmek fails to disclose the metal as comprising a Ti-6Al-4V composite. Moyson et al teach that it is well known to form an armor plate with a Ti-6Al-4V composite. See especially column 6, lines 50-55. Motivation to combine is the mere substitution of one known armor composite for another, with the advantages of the increased performance and desired properties provided by the materials taught by Moyson et al. To employ the teachings of Moyson et al on the armor of Klimmek and have a Ti-6Al-4V metal is considered to have been obvious to one having ordinary skill in the art.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Roopchand et al and Ravid et al are cited as being of interest since they disclose composite armors.

Art Unit: 3644

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Woodrow Eldred whose telephone number is 571-273-6901. The examiner can normally be reached on Monday to Thursday, from 8:00 a.m. to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. Woodrow Eldred
Primary Examiner
Art Unit 3644

JWE